

REMARKS

Entry of the foregoing, reexamination and further and favorable reconsideration of the subject application in light of the following remarks, pursuant to and consistent with 37 C.F.R. § 1.114, are respectfully requested.

Initially, applicants acknowledge the courtesy extended by Examiner Ewoldt to Dr. Jevnikar and applicants' representatives during the Examiner interview conducted on January 18, 2005. The substance of the interview is correctly indicated in the Interview Summary. However, it is noted for the record that on the Interview Summary form Examiner Ewoldt should have been indicated as being present and the Interview Summary should have also indicated that the interview was in person as opposed to by telephone.

Applicants note that a Second Information Disclosure Statement was filed on October 5, 2004. Since this Second Information Disclosure Statement was filed prior to the mailing of the final Office Action and filed with the fee as set forth in 37 C.F.R. § 1.97(e), the Examiner is respectfully requested to indicate his consideration of the materials cited therein by returning an Examiner-initialed copy of the PTO-1449 form submitted therewith.

Turning now to the Office Action, the Examiner has rejected claims 52, 59-61, 63, 69-91 and 95 under 35 U.S.C. § 112, first paragraph, as containing subject matters which was allegedly not described in such a way as to enable one skilled in the art to make and/or use the claimed invention. This rejection is respectfully traversed.

As discussed during the above-mentioned Examiner interview and detailed in the attached Declaration of Anthony M. Jevnikar (hereinafter "JEVNIKAR

DECLARATION"), the animal data which has been provided in the present application would be understood by those of skill in the art to support the use of the claimed methods and compositions in humans. See JEVNIKAR DECLARATION, ¶ 7.

Additionally, the experimental set up in Dr. Jevnikar's two earlier declarations of record, which demonstrate favorable and beneficial results in mice, is a credible *in vivo* model (that correlates to humans) and is often used by those of skill in the art. See JEVNIKAR DECLARATION, ¶ 6.

Contrary to the Examiner's position in the Office Action, the three documents referred to in the February 10, 2004 Office Action (Marketletter 1999, Goodnow 2001, and WO 02/53092) do not show that mouse models do not correlate to humans with regard a method for suppressing or reducing an immune response by administration of an antigen as is expressed and contained in a plant material. See JEVNIKAR DECLARATION, ¶ 3. Moreover, "[o]ral tolerance to protein antigens has in fact been demonstrated in humans after antigen ingestion." JEVNIKAR DECLARATION, ¶ 3 (discussing Exhibits A and B); see *also* JEVNIKAR DECLARATION, ¶ 4 (discussing NIH clinical trial).

Additionally, contrary to the Examiner's statements in the Office Action, Dr. Jevnikar's two earlier declarations are in no way admissions that one of ordinary skill in the art could not practice the claimed invention without undue experimentation. As Dr. Jevnikar has stated:

The use of the term "unexpected" in those declarations was merely to state that until the development of the present invention, one of skill in the art did not contemplate and thus would have not expected that an antigen could be successfully produced and administered in the same plant tissue which could then be orally administered. The presently claimed invention provides such a method. Accordingly, the presently claimed invention provides for "unexpected" advantages over the prior art that were not previously realized; such unexpected effects were

due to the fact that plant-derived antigens could be expressed in plants and administered orally such that the antigens are not adversely affected by digestion and thus can be more effective *in vivo*.

Thus, the plant could be used as both the expression vehicle and mode of administration for the antigen and this was never before contemplated.

JEVNIKAR DECLARATION, ¶5.

In view of the above (including the JEVNIKAR DECLARATION), the present application provides sufficient enablement so that one skilled in the art could make and/or use the claimed invention without undue experimentation. Thus withdrawal of the rejection under 35 U.S.C. § 112, first paragraph, is respectfully requested.

Claims 52, 59-61, 63, 69-91 and 95 have also been rejected under 35 U.S.C. § 103(a) as purportedly being unpatentable over WO 92/07581 in view of U.S. Patent No. 5,484,719. Applicants respectfully traverse this rejection.

WO 92/07581 describes a method for suppressing an immune response in a recipient mammal by administering an agent such as splenocytes from the donor, splenic extracts thereof, and cultured lymphocytes from the donor, extracts of such cultured lymphocytes or MHC antigens or fragments thereof from the donor. As Dr. Jevnikar has stated in the attached Declaration, the WO 92/07581 "reference does not teach any type of oral administration involving the use of any plant." JEVNIKAR DECLARATION, ¶ 8.

Contrary to the Examiner's position as set forth in the Office Action, there is no teaching or suggestion in the art that would lead the skilled artisan to utilize, in a method for suppressing or reducing the immune response of a mammal to an antigen, a plant tissue or a partially purified plant tissue extract containing the antigen or an immunosuppressive fragment thereof whereby the plant tissue or partially purified plant tissue extract was obtained from a transgenic plant expressing

the antigen or immunosuppressive fragment thereof in place of the donor cells or donor extracts discussed in WO 92/07581.

While U.S. Patent No. 5,484,719 ("the '719 patent") discloses expressing viral, bacterial or fungal antigens in a plant, the '719 patent discloses that the produced product is used for vaccination against harmful pathogens. See JEVNIKAR DECLARATION, ¶ 8. Vaccination against pathogens is a completely different use and thus method when compared to immune tolerance as is presently claimed in the subject application. See JEVNIKAR DECLARATION, ¶ 8. Since applicants' claimed invention is not directed to vaccination to prevent any type of infectious agent, the '719 patent is not relevant to the presently claimed invention. See JEVNIKAR DECLARATION, ¶ 8. "Vaccination to pathogens using oral administration of pathogen antigens represents completely different mechanisms for beneficial effect to that of immune tolerance to the endogenous proteins involved in autoimmunity." JEVNIKAR DECLARATION, ¶ 8. As a result of these differences, "[o]ne of skill in the art would not be motivated to combine the teachings of [WO 92/07581 and the '719 patent] and, even if combined, it does not permit one skilled in the art to arrive at the methods claimed in the subject patent application." JEVNIKAR DECLARATION, ¶ 8.

As such, the claimed invention cannot be considered, and indeed is not, obvious over the combination of references cited by the Examiner in the Office Action. In light of the above, the Examiner is respectfully requested to withdraw this rejection under 35 U.S.C. § 103(a).

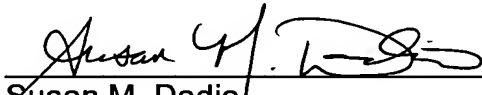
In view of the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order. Such action is earnestly solicited.

In the event that there are any questions relating to this Reply, or the application in general, it would be appreciated if the Examiner would telephone the undersigned attorney concerning such questions so that the prosecution of this application may be expedited.

Respectfully submitted,

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